TM616WS – Global Wireless Industry
Professor Clint Smith

Course Objectives:

This course introduces the student to the global wireless industry focusing on wireless mobility systems. The course will provide the student with an understanding of the various complexities facing management when deploying or operating a wireless mobility system. The course will utilize a combination of traditional text based material in addition to homework assignments. In addition there will be a class project that students will each have to work on as a team.

The course will focus on four main areas of a wireless mobility system as it relates to the technical management.

Global Wireless Mobility Market
Regulatory Requirements
Management Challenges
Decision Methods

Upon successful completion of the course the student should be able to

- Describe the global mobile wireless environment from a technical management aspect
- Understand the complexities in regulatory issues for a wireless system
- Understand many of the management decisions necessary for migrating or integrating a circuit switched mobility system with a packet system.
- Understand and describe the various possible organization structures for a wireless operator focusing on the pros and cons of each
- Know and Understand some of the more important performance metrics used by wireless management
- Understand the steps necessary for planning any wireless mobility system or expansion
- Understand and describe many of the deployment issues that a manager needs to factor into any planning process
- Understand the basic issues and topics which comprise a wireless mobility technical budget process

Course Outline:

Week 1: Global Industry Overview
Week 2: International Wireless Regulations
Week 3: US Wireless Regulations
Week 4: Implementation Considerations
Week 5: Wireless Mobility Operator Technical Organization
Week 6: Wireless Operators Dashboard Metrics

Week 7: Mid Term
Week 8: Initial Planning
Week 9: Wireless Planning and Deployment Decisions
Week 10: Forecasting
Week 11: Budget and Project Presentations
Week 12: Project Presentations
Week 13: Final

Course Material:

- Lecture Notes
- Text book – Wireless Network Performance Handbook, by Clint Smith & Curt Gervelis, McGraw-Hill, 2003 ISBN 0-07-140655-7
- Other reference material provided throughout the course

Grading Policy:

- Homework assignments 10%
- Online Quizzes 10%
- Project 20%
- Mid-term Exam 20%
- Final Exam (comprehensive) 30%
- Active participation 10%

Exams:

- Mid-term: weeks 1 through 5 only.
- Final : comprehensive.

The tests will be timed and last 2.0 hours. The time tests will be administered by a proctor and be held on the following dates and within the time indicated on the schedule.

Please note that the tests are to be closed book and closed notes. The Stevens Honor system applies for the exams as well as the entire course.

Homework:

I will be grading the homework, each homework item has points assigned to it. The homework is meant for learning and reinforcing the weekly lessons. Obtaining credit for the homework is achieved by showing attempting to earnestly answer each question. Answers to the homework will be posted. Homework will be due at the end of each week, for instance if the next class begin starts on the 15th, the homework is due by 23:55 on the 14th.

Quizzes:

Quizzes will be given on a weekly basis, with the exception of the midterm and final. The quizzes will typically be 5 questions in length. There will be a total of 10 quizzes and the lowest

quiz will be discarded from the average. The quizzes are open book and open notes but have to be done individually, SIT honor code applies.

Project:

The class project involves real world situation where a GSM system is overlaid onto an existing TDMA network. You will need to perform high level technical and managerial decisions related to the operation of the system and services offered. The project will assume you are the engineering manager for a department and will not require you to perform a engineering design.

- The assumptions for the project will be provided.
- The format for the report as well as the budget will be provided and expected to be followed, it will become obviously later why adhering to the format will be necessary.
- Teams will be assigned.
- You will need to determine a team leader from your assigned team. The team leader will be the primary contact between myself and the team for all project related issues.
- There are particular progress milestones you need to meet for the project besides the final due date.
- The project will be posted and judged by fellow colleagues in the class

Ethical Conduct

The following statement is printed in the Stevens Graduate Catalog and applies to all students taking Stevens courses, on and off campus.

"Cheating during in-class tests or take-home examinations or homework is, of course, illegal and immoral. A Graduate Academic Evaluation Board exists to investigate academic improprieties, conduct hearings, and determine any necessary actions. The term 'academic impropriety' is meant to include, but is not limited to, cheating on homework, during in-class or take home examinations and plagiarism."

Consequences of academic impropriety are severe, ranging from receiving an "F" in a course, to a warning from the Dean of the Graduate School, which becomes a part of the permanent student record, to expulsion.

Reference: *The Graduate Student Handbook, Academic Year 2003-2004 Stevens Institute of Technology, page 10.*

Consistent with the above statements, all homework exercises, tests and exams that are designated as individual assignments must contain the following signed statement before they can be accepted for grading.

_____

I pledge on my honor that I have not given or received any unauthorized assistance on this assignment/examination. I further pledge that I have not copied any material from a book, article, the Internet or any other source except where I have expressly cited the source.

Name (Print) _____ Signature _____ Date: _____

Please note that assignments in this class may be submitted to www.turnitin.com, a web-based anti-plagiarism system, for an evaluation of their originality.

Instructor Information:

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